

# A Poweful command on **Electrical Power**





Shwetech Technology Private Limited

# **ABOUT US**

STPL is one of the leading manufacturer of LT Panels, Automation Equipments. Bus Ducts, Bus Trunk, Rising Mains & Trunky Proiects. Over a decade we have had the privilege of serving leading companies in almost every segment of the industry including Public Sector, Government Undertaking.

STPL - A vision that brought hardcore professionals together is today a flounshing enterphses and a committed team of qualified engineers engaged in Design. Engmeering. Manufacturing. Supply, Installation. Testing and Commissioning.

We have also pined hands with vendors to procure the latest and the best of matenals for use in the manufacturing of our wide range products and turnkey projects. We appreciate and understand the importance of JIT and work closely for a WIN-WIN situation.

We all at STPL believe 'we invent the future and have therefore chosen the path of dedicated services to our valued custorms by our quality products. business ethics & zero defect services".

# ACCREDITIONS

STPL is a ISO 9001:2015 & ISO 14001:2015 Certified organization by MMS-EGAC for DESIGN, ENGINEERING, MANUFACTURING, SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF ELECTRICAL POWER, DISTRIBUTION AND CONTROL EQUIPMENTS.

STPL products have been type tested and upgraded to fulfill the requirements of designed parameters and project specifications at CPRI, ERTL etc.



# **CORPORATE MISSION**

We at STPL aim to provide our products & Services world-wide as an Electrical Engineeting Ceompany manufacturing wide range of Electrical Power. Generation & Control Equipments, As complete electrical power solution provider on Turnkey Basis. We will seek to be the industry benchmark in terms of quality. of Products & Services and timely execution of contracts.

STPL intends to achieve this leadership status by leveraging the combination of world class product design, manufacturing infrastructure, engineering and customer services.

# **QUALITY POLICY**

We are committed to excellence in Design, Engineering, Manufacturing, Supply, Installation, Testing and Commissioning of Electrical Power, Distribution and Control Equipments through:

- Involvement of people.
- Upgradation of technology.
- Customer Satisfaction.

by providing adequate resources including the infrastructure and competent personal / We shall review our quality management systems to achieve continuous improvement.

# **PRODUCT RANGE**

STPL offer wide range of custom built fully compartmentalized LT Switchboards & Control / protection panels for handling power up to 400 KV covering.



- LT Distribution Panel
- Load Management Panel
- Outdoor Power Panel
- DG Synchronization Panel
- Marshalling Panel
- Electrical Panel
- Low Tension Panel
- Power Control Panel
- Process Control Panel
- Control Panel Board
- Power Distribution Panel
- Fire Panel
- ACB Distribution Panel

- Capacitor Panel
- Medium And Low Voltage
- Panel
- Power Control Center Panel
- Motor Control Center Panel
- Mimic Panel
- PLC Control Panel
- Instrumentation Panel
- VFD Panel
- Soft Starter Panel
- AMF Control Panel
- Synchronizing Panel
- Feeder Pillar Panel

# **WORKING PROCESS DETAILS**

### **Sheet Metal Fabrication:**

High quality CRCA sheet first are fed first into the CNC punch press. The computer of the machine accepts the necessary drawing in digital format and carries out slotting and punching using 31 station of the turret. All doors and structural member are accurately punched/ slotted to ensure high level accuracy.

After punching, the sheet process for bending NC bending press, which bends the sheet for making doors, angles for profile for use as a structural member. Required accuracy is achieved with NC controller.

### Surface Treatment:

Good paint enhances look and life. Today's painting technology is highly advanced. The basic features of good painting are good adhesion of paint and its durability. Therefore, a pre-treatment of surface is of great importance.

Pre-treatment of a surface preparation is done by removal all foreign particles like oil greases and rust, and by providing a layer of phosphate for good adhesion of paint. Pre-treatment is done by an established process of dipping in 8 tanks with help of electric hoist running over the tank.

#### **Powder coating:**

After surface preparation all enclosure and doors and covers are coated with RL-7032/7035(Textured finished) by spraying the powder with electrostatic gun in painting booth, which provides wrap- all-around effects on all sides.

Subsequently all components are moved on monorail to a curing oven where is baked at 240°C degree temperature. The finished surface is checked, before is used in assembly.

#### Assembly:

This shop is equipped with various kinds of tools and storage racks to receive a painted component and members, which are assembled as per number of feeders required in the design. The total framework including gasket ting finished here, before sending to the frame to the assembly shop.

Subsequently component fixing wiring and Bus bar fixing work is carried out.

Wiring is carried out by using copper conductor PVC insulated wire with the size of which are kept sufficiently adequate to keep good safe margin. Colour coding in power wires and separate coloured wire for control wiring of D.C & A.C are used.

#### Inspection, Testing, and Quality Assurance:

All inward components are checked at our inward TEST-LAB of their various defined parameters.

Stage wise inspection checking are carried out during fabrication, painting, assembly basbar and wiring stages etc. after completion of the job all routine and functional test are carried out in accordance with QAP's.

After the satisfactory reports, equipment is packed for shipment to avoid any damages during the transportation. The necessary as built drawings, technical data and Test certificates are provided along with dispatched documents

# WORKING PROCESS DETAILS

After the satisfactory reports, the equipments are packed for shipments to avoid any damages during transportation. The necessary As Built Drawings. Technical Data & Test Certdicates are provided along with the despatch documents. After Sales Service Team provide services as & when required. Necessary review meetings for knowledge sharing, training etc, are held between all the departments for CA/PA actions, to avoid repetitions and continuous improvement in services at all stages.



# **DRAWOUT TYPE PANELS**

STPL make drawout type PMCC's/MCC's are well designed & manufactured by experienced Engineers having 32 years practical experience in Design, a Development f Drawout type iNon-drawout type switchboards. Drawout equipments meet the toughest manufacturing quality standards and are subjected to various manufacturing processes to ensure reliability, safety, interchangeability & ruggedness. The products meet the technical requirements of all types of industries such as Cement, Power, Steel. Chemical and other infrastructure projects.

- Ensures minimum operational down time.
- High Degree of operating personnel safety & dependability.
- Power as well as control contacts are self aligning type.
- There are four distinct- service, test. isolate & fully withdrawn position.
- To all positions the withdrawal module has got locking.
- Gravity operated shutters are provided to cover live bus bars whe n modules are removed.
- Draw-out power contacts are type tested at CPRI for 50KA / for 1 Sec with back-up protections.
- Tested to establish continuous current carrying capacity.
- Voltage drop between male & female contracts tested at CPRI.
- Dielectric properties are checked for any leakage through support on which they are mounted,
- Drawout contacts are tested for mechanical endurance test to prove its life. These are available from 32 Amp to 630 Amp.

# **SALIENT FEATURES**

- Fully compartmentalized & Modular design.
- Continuous foundation channels & Lifting hooks on each shipping section.
- Fabricated out of heavy gauge CRCA sheet steel profiles to make the structure rigid and strong.
- Doors/covers provided with compressible gasket to ensure high degree of ingress protection meets the desired IP rating.
- Available in Single Front, Double Front, Front Access, Back-to-Back/ specified versions.
- Versatile enclosure system allows for future extension of switchboard.
- Main horizontal Busbar at Top/Bottom/Middle.
- Vertical Busbar at Side/ Rear.
- Cable termination from Top/Bottom/Both.
- Non-ferrous gland plates for single core cables.
- Busbars of Aluminum E-91E-WP Alloy/ Copper of electrolytic grads as per relevant IS.
- Busbars are supported on specially designed SMC/DMC supports with High clearance/ creepages which ensures.
  - High Mechanical withstands capabilities during fault conditions.
  - High tracking index.
  - High temperature withstands fire retardant.
  - No moisture absorption (non-Hygroscopic).
  - Fully with drawable chassis.
- Fitted with self-Aligning, Sliding/ stab-in silver plated copper contacts both for power & control cables.
- Suitable insulated gravity operated shutters on live parts provided to ensure total safety.
- Each draw-out module is provided with four distinct service, test isolation & fully withdrawn positions.
- Interleaved design of Busbar of Rating 2500A and above.

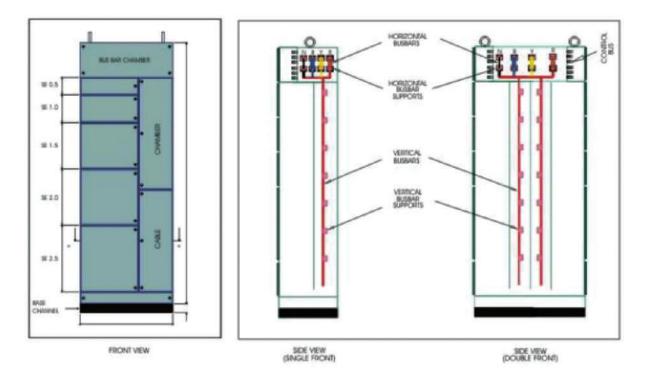




## GENERAL SPECIFICATIONS STPL SERIES PCC'S. PMCC'S, MCC' S & DISTRIBUTION BOARDS

Quality Certificate Manufacturer		ISO:9001:2000
Types of Product		LV Switchboard
Standards		IS/IEC:61439-1,2011,61439-2,2011
IP Rating External		Up-to IP 52-54 indoor application &
		IP 44-45 / 54-55 / 64-67 outdoor application
Construction		Frame Structure 2mm folded CRCA sheet
		steel
	Cover Plate, Door	1.6mm/2mm CRCA Sheet
	Internal	Perforated Sheet/ Transparent
	segregation	Polycarbonate sheet/ FRP Sheet
Cabling Access		Suitable for front and rear access cabling.
-		Entry provided via gland plate that facialte
		either top or bottom entry.
Busbar	Material	Electrolytic grade aluminium/ copper
	Mounting	TPN air insulated mounted on glass fibres
		reinforced module supports / SMC/DMC
Supports	Shielding	Non-conductive rigid insulated barriers or
		rigid sheet barriers
Maximum Current & Fault		1250-4000A 50KA for 1 sec
withstand rating		4000A & Above 70 KA for 1 sec
Switchboard certification bodies		CPRI Bhopal
Types Test In-depended		
Certification		
-Temperature Rise		
-Degree of Protection		
Earthing:		Earth bar sizes at 300mm2 for 50 KA for 1
		sec fault level, Earth continuously
		maintained fixing serial
Rated Operational Voltage		415V
Rated Insulation Voltage		1100V
Power frequency withstand		2500V Act 50c/s
voltage		
Rated operational Current		As per project specification
Labels		screen printed aluminium plate fixed with screw
Paint Finish		Siemens grey RL-7032/7035 or other shade
, and i mon		required
Paint depth		60 micron
Paint process		8 tank pre-treatment process with powder
		coated and curing in a high temperature
		controlled oven

## A TYPICAL VIEW OF LT MCC

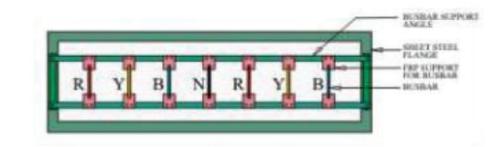


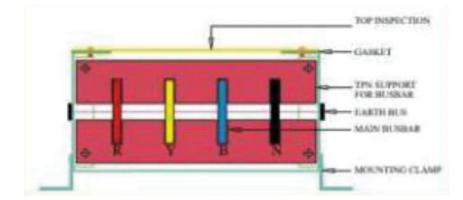
SECTION - 'AA' UNCOMING TO FEEDER CRANKING SPINDLE

	General Ov	verall D	imension (mi	m)		
Busbar Rating	MCC Depth		PCC Depth	Height	Width	
	SF	DF			MCC	PCC
200-630A	400/550	950	950	2325	800	600
600-1250A	950	950	1250	2325	800	600
1500-3200A	1500	1500	1500	2325	800	800
4000-6300A	1600	1600	1600	2325	800	1000

# BUS DUCTS, BUS TRUNKINGS & RISING MAINS / ACCESSORIES

BUS DUCTS	RISING MANS
400 A-6300 A TP/TPN	63 A-3200 A DP/TP/TPN/TPNE
Segregated/Non-segregated	Non-segregated
AL/GP/SS	AL/GP/SS
IP40 - IP55 (Indoor / Outdoor)	IP40 - IP55 (Indoor / Outdoor)
Alu/Copper	Alu/Copper
Interleaved/Non-interleaved	Interleaved/Non-interleaved
Fiber Glass Reinforced Plastics	Fiber Glass Reinforced Plastics
Epoxy Powder Coating	Epoxy Powder Coating
As required	As required
	400 A-6300 A TP/TPN Segregated/Non-segregated AL/GP/SS IP40 - IP55 (Indoor / Outdoor) Alu/Copper Interleaved/Non-interleaved Fiber Glass Reinforced Plastics Epoxy Powder Coating





# NATURE OF WORK

## **INTERNAL ELECTRIFICATIONS**

- Distribution Boards.
- Fire Alarm System.
- Public Addressable System.
- CCTV / Video Surveillance System.
- Access Control System.
- Data Networking, Telecom & EPABX
- Raceway & Cable T ray.
- BMS System.
- Central UPS System.
- Video Conference System.
- Fire Hydrant & Sprinkler System
- Cable Tray & Cable Trunk
- HT & LT Cable & End Termination.
- Rising Mains & Bus Duct.
- MV Panel Distribution Panel Control Panel VFD Panel Etc.
- Solar System.
- Landscape Cabling.
- Landscape Pole & Light Fixture

## **EXTERNAL ELECTRIFICATION**

- Supply, Installation & Commissioning of 33/11KV Sub Stations.
- Installation & Commissioning of 11 KV lines and 11/.433KV Sub Stations.
- Installation, testing & Commissioning of HT / LT works of Office Buildings, Residential Premises & Apartments, Industries, Workstations
- Laying and Networking of LAN and Data Cables.
- PLCC / SCADA Implementation.
- Electrification of Telecom Tower Inf rastructures.
- Installation of Power Transformers and Vacuum Circuit Breakers, Air Circuit Breakers, Automatic Panels etc.
- Survey, Drawing, Design, Errection, Testing & Commissioning of 33/11KV Sub Stations.
- Laying and Commissioning of Power/LT Cables.
- Distribution Transformer Up to 33 kV
- DG Set Up to 2500 KVA with Cooling System

# **TURNKEY PROJECTS**

STPL is also executing the projects on Turnkey basis like Switchyards, Substations, Distribution, Packages, Infrastructure Projects, Industrial Projects, Solar Projects ets. The complete execution starting from basic engineering detailed engineering, supply, installation, testing & commissioning for Big Industrial Houses, Utilities etc.













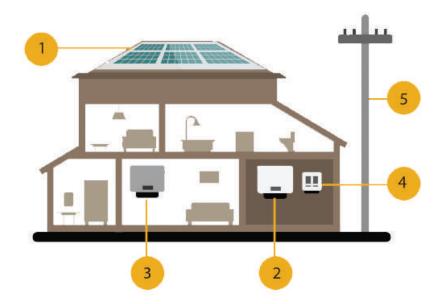
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## SOLAR ENERGY

Energy from the Sun that converted into electricity using Pv panels.

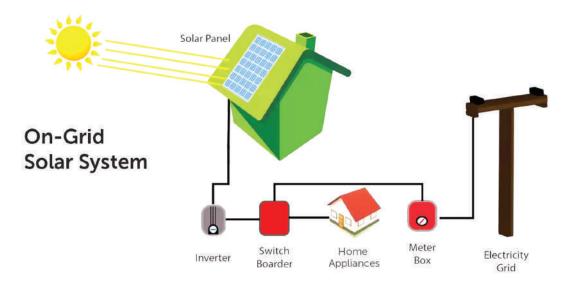
How Solar Energy System Works?

- Solar Panels turn sunlight in to DC energy.
- Inverter convert AC energy into DC Electricity.
- Service panels distributes power needed where throughout your home.
- Utility meter track energy produced, and energy used.
- Grid connection ensures access to continuous power at light.



## **On-Grid System**

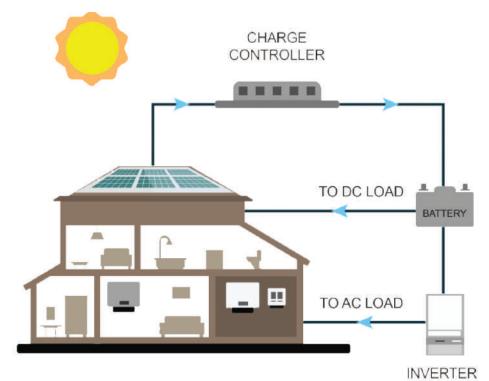
You don't have to worry about storing any energy: the grid will usual be there to make sure all loads can run when the user wants them.



## Off-Grid System

Off Grid can be stand alone power system or mini grids typically to provide smaller community electricity.

Off Grid solar power stores DC Electricity in batteries



# FEW OF OUR SATISFIED CUSTOMERS







**Reliable • Trouble Free • Long Life** 

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## **Get In Touch With Us**

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